Mound Site, Miamisburg, Ohio

FACT SHEET

This fact sheet provides information about the Mound Site, in Miamisburg, Ohio.
This site is managed by the U.S. Department of Energy Office of Legacy Management.

Site Description and History

The Mound Site, named for a nearby Native American burial ground, is located in Miamisburg, Ohio, approximately 10 miles southwest of Dayton. The Great Miami River flows southwest through Miamisburg and dominates the geography of the region surrounding the Mound Site. The river valley is highly industrialized; the rest of the region is a mix of farmland, residential area, small communities, and light industry. Many residential developments, five schools, the Miamisburg downtown area, and six city parks are located within a mile of the Mound Site.

The Mound Site sits atop an elevated area overlooking the city of Miamisburg, the Great Miami River, and the river plain area to the west. Site elevations vary from 700 feet to 900 feet above sea level; most of the site is 800 feet above sea level.

Construction of the Mound facility began in 1946 to support the early atomic weapons programs. Early work at the site involved production of polonium-beryllium initiators used in early atomic weapons and research related to radionuclides and detonators. In the 1950s, the facility manufactured a variety of nuclear weapons parts, including cable assemblies, explosive detonators, and electronic firing sets that activated them. The Mound Site evolved into an integrated research, development, and production facility performing work in support of the U.S. Department of Energy's (DOE's) weapons and energy programs, which included stable isotope separation, fossil fuels research, tritium recovery for reuse in weapons, development of radioisotopic thermoelectric generators that provided electrical power for space exploration (Galileo), and other nonnuclear research and development.

The plant, which was in operation from 1948 to 2003, was situated on 182 acres. In 1983, DOE purchased an additional 124 acres of land south of the original property, but that property remained undeveloped. At its peak the Mound facility encompassed 116 buildings.

Regulatory Setting

In 1984, DOE established the Environmental Restoration Program at the Mound Site. The program collected and assessed environmental data to evaluate the nature and extent of contamination and identified potential exposure pathways and potential human and environmental receptors. Comprehensive chemical and radionuclide characterizations identified contamination in soil, ground water, surface water, and buildings at the Mound Site. Most of the contamination was identified as low-level radioactivity in soil and volatile organic compounds in the ground water. Due to the presence of ground water contamination, the U.S. Environmental Protection Agency (EPA) placed the Mound Site on the National Priorities List in November 1989. The National Priorities List is a list of top-priority hazardous waste sites that are eligible for cleanup under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as the Superfund Program. EPA administers the Superfund Program, and site remediation is conducted in accordance with CERCLA regulations.

Location of the Mound Site

The CERCLA process includes completion of a variety of decision-making documents—Remedial Investigation/Feasibility Study, Proposed Plan, Record of Decision, and Remedial Decision—and implementation of the remedial action. Preliminary assessments of contamination at the site identified 124 locations of actual or suspected releases of volatile organic compounds in the ground water. The standard nomenclature in the CERCLA process was used to group these locations into nine operable units.

A Federal Facilities Agreement between DOE and EPA was signed in October 1990 and was reissued in 1993 to include the Ohio EPA because DOE decided to close and decommission the site. The agreement established a procedural framework and schedule for developing appropriate response actions and facilitated cooperation and exchange of information among the agencies.

In 1995, as DOE and its regulators became more involved with the initiation of the cleanup process and began to evaluate data, they identified a significant quantity of historical data that had been maintained for the site. Such historical data are often rare and unreliable, but these data were consistent with site conditions, which led to development of a site-specific approach for making decisions about the environmental restoration of the Mound Site and its facilities. The MOUND 2000 process acknowledged the existence of historically accurate data, allowing a more economical and expedited cleanup which satisfied the requirements of CERCLA. With the new process, the nomenclature changed to include parcels and phases; only two original operable units remained. The MOUND 2000 process addresses buildings and potential release sites individually. A potential release site is an area where knowledge of historical or current use indicates that the site may have had releases of radioactive and/or hazardous materials. Approximately 116 buildings and 400 potential release sites were identified.

The core team of representatives from EPA, Ohio EPA, and DOE reviewed the status of each building and potential release site and based their decisions regarding the necessity for remediation on historical and current assessment data. The team then used a binning process to determine a path forward for each building and potential release site. The buildings and potential release sites were binned as (1) no further action; (2) further action, not enough information to make a good decision, gather more data; and (3) remedial action. All wastes were disposed of in accordance with respective regulatory requirements.

The 306-acre DOE Mound Site was divided into discrete land parcels: Phase I (consists of three subparcels, A, B, and C); Parcels 3, 4, 6, 6A, 7, 8, and 9; and Parcels D and H.

Miamisburg Mound Community Improvement Corporation

In 1998, DOE established a sales contract to convey Mound property to the Miamisburg Mound Community Improvement Corporation (MMCIC) by discrete parcels, subject to the CERCLA process. Land-use restrictions are conveyed with the property to ensure that it will always remain protective of human health and the environment.

The first parcel of land was transferred to MMCIC in February 1999. Since that time, more than 40 percent of the site footprint has been transferred, including three additional parcels. With DOE support, MMCIC and the community formed a partnership to transition Mound for reuse as a technology and industrial park. MMCIC was chartered with the vision of establishing the Mound Advanced Technology Center to diversify the region's economy and to generate new job opportunities for dislocated DOE contractor workers and other area residents. DOE has supported the economic development efforts with grants and matching funds totaling more than $62 million. The Mound Advanced Technology Center currently houses 27 businesses with more than 325 employees.

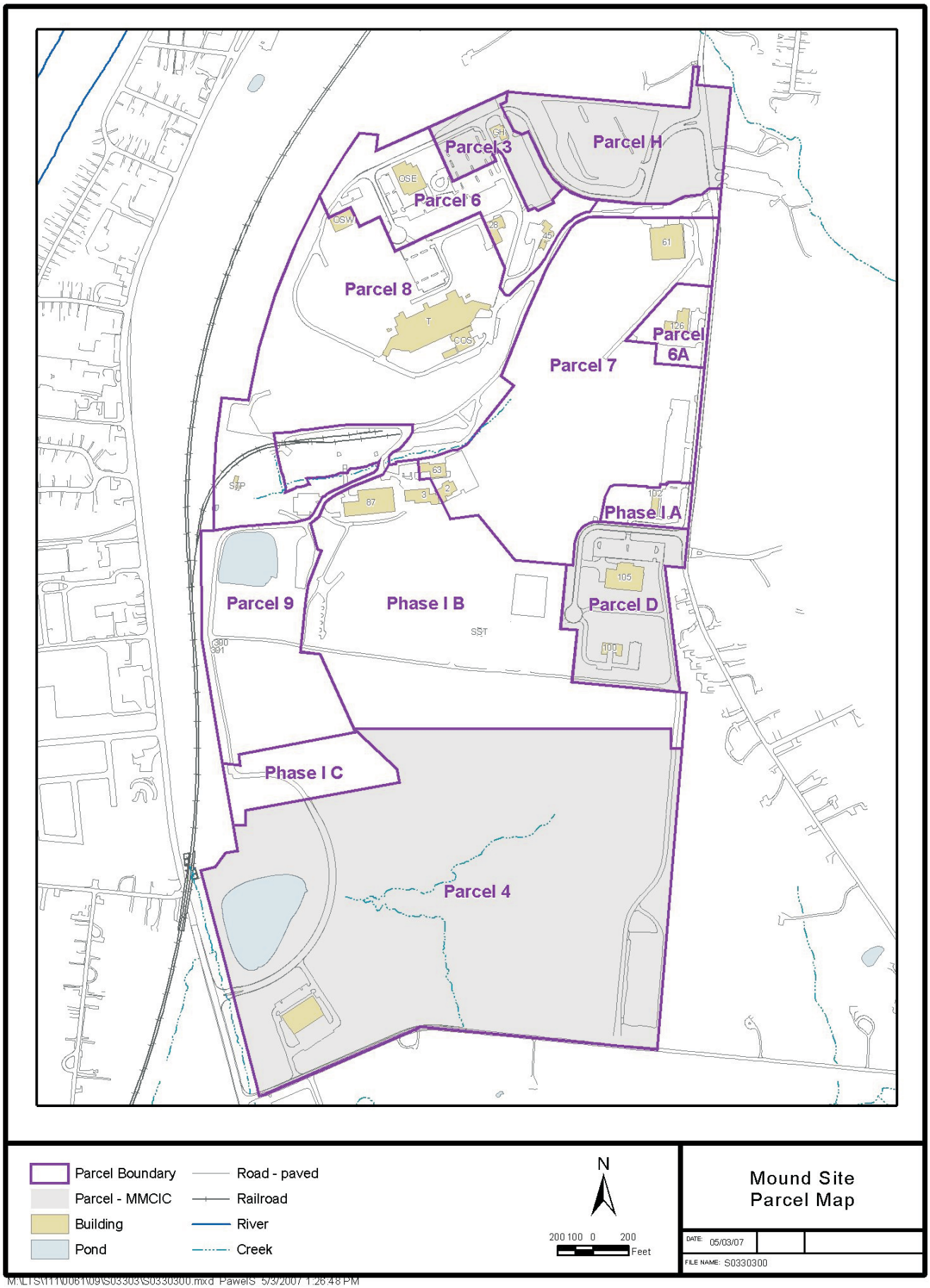
Site Status

As of September 30, 2006, all nuclear material has been shipped off site, facilities have been demolished or transitioned, and environmental remediation activities are complete. Parcels D, H, 3, and 4 have been conveyed to MMCIC. The Phase I parcel has completed the CERCLA 120(h) requirements for property transfer, but DOE has yet to offer the parcel to MMCIC for conveyance. Parcels 6, 7, and 8 have not completed the CERCLA 120(h) process. Operable Unit 1, an area of ground water contamination located at the westernmost boundary of the Mound Site and Potential Release Site 441 (the rail-yard area) in Parcel 9 is being excavated under a congressionally-funded project.

Roles and Responsibilities

The DOE Office of Environmental Management is responsible for the cleanup and closure of the Mound Site. This includes the Operable Unit 1 Cleanup Project and the transfer of all parcels, including nine facilities, to MMCIC through the site sales agreement.

The DOE Office of Legacy Management is responsible for site management following completion of the Office of Environmental Management cleanup effort and accepted responsibility for the Mound Site on August 1, 2006.



Land Parcels at the Mound Site

Legacy Management Activities

The DOE Office of Legacy Management has responsibility for the long-term surveillance and maintenance of all DOE remedial action sites, disposal sites, and other sites, as assigned, that (1) have no ongoing DOE mission and (2) are not part of a larger DOE facility. The DOE Office of Legacy Management is responsible for compliance with the long-term requirements outlined in the Mound Long-Term Surveillance and Maintenance Plan. These activities include all engineered and institutional controls designed to contain or to prevent exposure to residual contamination and waste, such as surveillance activities and inspections to evaluate the condition of surface features, ground water monitoring, and posted signs.

The Site Sales Contract calls for the property to transfer to MMCIC no later than February 2008.

Community Involvement

DOE continues to work with local community groups to keep them informed about site activities. Stakeholder groups include MMCIC; the Mound Reuse Committee, a nonpartisan broadly representative, independent advisory organization with concerns related to the future use and cleanup of the site; Mound Environmental Safety and Health, devoted to environmental protection and safety and public health issues; and the Mound Museum Association that is working to preserve the history of the former Mound Site.

Contacts

Documents related to the Mound Site are available on the DOE Office of Legacy Management website at http://www.LM.doe.gov/land/sites/oh/mound/mound.htm.

For more information about DOE Office of Legacy Management activities at the Mound Site, contact

U.S. Department of Energy
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